BRUHAT BANGALORE MAHANAGARA PALIKE

MEASUREMENT SHEET
FIRST AND FINAL BILL

Name of work: Drilling of Borewell, Providing and Installing Pump, Motor and other accessories at HMT Layout, Thindlu, Vidyaranyapura areas in Ward No. 09 (Vidyarnayapura), Vidyaranyapura sub Division.

Estimated Cost : Rs. 35.00 Lakhs

Head of Account : P-1802 Water Supply new Areas

Name of Agency: Sri B. Chandrashekar, No. 28, Anjaneya Swamy Layout, 1st Main Road, Thindlu, Vidyaranyapura Post, Bangalore - 97.

Work order No: BBMP/EE/BTP/WO/84/2020-21 Dated: 20.08.2020.

Measurements Recarded on : 20.10.2020

Sl No	Description of item	No	L	B	D	Qty	Rate / Unit	Amount
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its qualityf 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction						Each	
	4th Main 1st Cross, Durga Layout	1				1		
	2nd Cross Anjaneya Swamy Layout	1				1		
	1st Cross, 1st Main, Kempegowdanagara Tennis Cout	1				1		
	5th Main Puttanjinappa Layout Deshabandunagara	1				1		
						4	3447.72	13791.00
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,)						Mtrs	
	Borewell 1 to 4 Nos							
	0 to 50 m	4	50.00			200.00	317.50	63500.00
3	50 to 100 m	4	50.00			200.00	404.43	80886.00
4	100 to 150 m	4	50.00			200.00	417.24	83448.00
5	150 to 200 m	4	50.00			200.00	490.44	98088.00
6	200 to 250 m	4	50.00			200.00	580.11	116022.00
7	250 to 300 m	4	50.00			200.00	640.50	128100.00
8	300 to 350 m							
	Borewell 1	1	52.00			52.00		
	Borewell 2	1	52.00			52.00		
	Borewell 3	1	49.00			49.00		
	Borewell 4	1	51.00			51.00		
						204.00		
						200.00	754.88	150976.00

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BBMP, Bangalore - 97

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Sl No	Description of item	No	L	B	D	Qty	Rate / Unit	Amount
9	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe - grade of Steel Fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7 mts both ends threaded confirming tio IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusive of all taxes and durties) Prices include Collar-medium duty						Mtrs	
	175 mm dia MS Pipe x 5.4mm thick							
	Borewell 1	13	6.00			78.00		
		1	4.00			4.00		
	Borewell 2	13	6.00			78.00		
		1	4.00			4.00		
	Borewell 3	13	6.00			78.00		
	Borewell 4	13	6.00			78.00		
		1	3.00			3.00		
						323.00		
						320.00	1262.78	404064.00
10	Providing 250mm dia PVC Pipe 6kg/cm						Mtrs	
	Borewell 1	3	6.00			18.00		
	Borewell 2	3	6.00			18.00		
	Borewell 3	3	6.00			18.00		
	Borewell 4	3	6.00			18.00		
						72.00	1006.50	72468.00
11	Providing and fixing Borewell Cap & Clamp Set						Nos	
	For 4 Borewells	4				4	1647.00	6588.00
12	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps						Each	
	15 HP 30 Stage for 4 Borewells	4				4	58100.67	232403.00
13	GI Pipe 50 mm'B' class						Mtrs	
	GI Pipe 50 mm							
	Borewell 1	58	6.00			348.00		
		1	4.00			4.00		
	Borewell 2	58	6.00			348.00		
		1	4.00			4.00		
	Borewell 3	58	6.00			348.00		
		1	2.00			2.00		
	Borewell 4	58	6.00			348.00		
		3	3.00			3.00		
						1405.00		
						1400.00	379.72	531608.00
14	Heavy Duty Collar 50 mm dia						Nos	
	For 4 Borewells	4	59.00			236	164.70	38869.00
15	Providing non-return valve 50 mm						Nos	
	For 4 Borewells	4				4	1647.00	6588.00

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15 16	Providing Gate Valve 50 mm						Nos	
	Borewell 1	7				7		
		5				5		
		4				4		
	Borewell 2	5				5		
		6				6		
		7				7		
		5				5		
	Borewell 3	4				4		
		5				5		
		6				6		
	Borewell 4	7				7		
		5				5		
		6				6		
						72	1647.00	**118584.00**
17	Supplying and Fixing Out Door Panel up to 15 HP						Nos	
	For 4 Borewells	4				**4**	14182.50	**56730.00**
18	Submersible Cable 1x3x6.0 Sq.mm						Mtrs	
	For 4 Borewells							
	Borewell 1	11x2	30.00			660		
		2	2.00			4		
	Borewell 2	11x2	30.00			660		
		2	2.00			4		
	Borewell 3	11x2	30.00			660		
	Borewell 4	11x2	30.00			660		
		2	4.00			8		
						2656		
						2560	131.76	**337306.00**
19	Labour charges for erection as new /repaired submercible pumpset allong with GI pipe (32/50mm) cable (new submercible pumpset if required will be supplied by the department free of cost and released pumpset shoud be handed over to department including transportation (Each lenth =6.00)						Length	
	For 4 Borewells	4	54.00			**216**	80.52	**17392.00**
19 20	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15mm thick plank on both sides of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws.,						Nos	
	For 4 Borewells	4				**4**	267.18	**1069.00**
20 21	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975GROUP-A **4 core 16 Sqmm**						Mtrs	
	For 4 Borewells							
	Borewell 1	1	30.00			30.00		
		1	6.00			6.00		
	Borewell 2	1	30.00			30.00		
		1	6.00			6.00		
	Borewell 3	1	30.00			30.00		
		1	4.00			4.00		
	Borewell 4	1	30.00			30.00		
		1	5.00			5.00		
						141.00		
						140.00	137.25	**19215.00**

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Sl No	Description of item	No	L	B	D	Qty	Rate / Unit	Amount
21	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975. **6.5.1 6Sqmm to 16 Sqmm)**						Mtrs	
		Qty Vide Item No. 19				**140.00**	10.87	**1522.00**
23	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.						Mtrs	
	For Cutting Road Surface							
	Borewell 1	1	30.00			30.00		
		1	2.00			2.00		
	Borewell 2	1	30.00			30.00		
		1	2.00			2.00		
	Borewell 3	1	30.00			30.00		
		1	1.00			1.00		
	Borewell 4	1	30.00			30.00		
		1	1.00			1.00		
						126.00		
						120.00	69.54	**8345.00**
24	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV.						Mtrs	
	40mm dia GI pipe For 4 Borewells	4	4.00			**16.00**	306.52	**4904.00**
24 25	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.						Nos	
	16Sqmm For 4 Borewells	4				**4.00**	247.05	**988.00**
26	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 12 mm dia,						Each	
	For 4 Borewells	4				**4**	2744.73	**10979.00**
26 27	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.						Nos	
	32 Amps For 4 Borewells	4x6				**24**	159.21	**3821.00**
28	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. **6-32Amps TPN**						Nos	
		4				**4**	1569.22	**6277.00**
29	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat, dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete						Sq.cm	
	16SWG For 4 Borewells	4x2	120.00	60.00		57600.00		
		4	360.00	25.00		36000.00		
						93600.00	0.32	**29952.00**
30	Earthwork excavation for pipeline trenches including deporiting or bank up to a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in th following strata by Manual Means . **Ordinary Soil**						Cum	

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	Qty as per Premeasurement vide E-MB Page No. 01 is =					97.20	239.73	23302.00
30 31	Providing and instalation at site of works P.V.C.Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc.,						Mtrs	
	Qty as per Premeasurement vide E-MB Page No. 02 is =					270.00	189.40	51138.00
31	Filling the foundations trenches using approved sand as per drawing and technical specifications in 250mm layers, wherever necessary watering and ramming, including cost of all materials, labour complete as per specifications.						Cum	
	Qty as per Premeasurement vide E-MB Page No. 03 is =					32.04	2947.53	94439.00
32	Refilling the basement and pipeline treanches with secleted available earthe for trench excavation including watering, consolidation in layers of 15 cm thick including disposing of the sunplus earth with a lead of 200 mtrs						Cum	
	Qty as per Premeasurement vide E-MB Page No. 04 is =					65.16	94.24	6141.00
	Sub Total A							2819503.00
	GST @ 12%							338340.00
	BESCOM Deposit for Borewell	4	1730+9140+100+9+9 = 10988					43952.00
							Total	3201795.00

Rupees Thirty Two Lakh(s) One Thousand Seven Hundred Ninety Five Only

Assistant Engineer
Ward No. 09

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